

01-107/RCE

REMARKS

This document is nearly identical to the amendment filed on 2003.08.20, except that the text of the withdrawn claims, previously omitted, has been included in this document. This document is filed in response to the notice of non-compliant amendment dated 2003.08.27.

Claims 1-6 and 8 are in the case. Claims 1-3, 5-6, and 8 are rejected under 35 USC § 102 over Japanese publication 05-121767 to Matsumi. Claim 3 is rejected under 35 USC § 103 over Matsumi in view of USPN 6,309,943 to Glenn et al. Claim 4 is rejected under 35 USC § 103 over Matsumi in view of USPN 4,423,127 to Fujimura. Claim 1 has been amended. No new matter has been introduced by the amendments, which are supported by the disclosure of the original claims and the specification when considered in their entirety. Reconsideration and allowance of the claims are requested.

CLAIM REJECTIONS UNDER §102

Claims 1-3, 5-6, and 8 are rejected under 35 USC § 102 over Matsumi. Independent claim 1 claims, *inter alia*, an integrated circuit substrate having a first surface for receiving a series of aligned layers during the creation of the integrated circuit, and a second surface disposed substantially opposite the first surface, the second surface having no layers formed thereon and at least one alignment mark formed thereon prior to the first surface receiving any of the series of aligned layers during the creation of the integrated circuit, the at least one alignment mark adapted for aligning the series of aligned layers one to another during the creation of the integrated circuit.

Matsumi does not describe such a substrate. Matsumi describe "mark 204 [that] is *formed in the oxide film* 203 of the rear face of the first semiconductor substrate 201," (emphasis added). Thus, the mark 204 of Matsumi is not formed on or in the substrate 201, but rather is formed in the oxide film or layer that covers the back side of the substrate 201. This is very different from the current invention as claimed in claim 1, where the alignment mark is formed on the substrate. Thus, claim 1 patentably defines over Matsumi. Reconsideration and allowance of claim 1 are respectfully requested.

01-107/RCE

Dependent claims 2-3, 5-6, and 8 depend from independent claim 1, and contain additional important aspects of the invention. Therefore, dependent claims 2-3, 5-6, and 8 patentably define over Matsumi. Reconsideration and allowance of dependent claims 2-3, 5-6, and 8 are respectfully requested.

CLAIM REJECTIONS UNDER §103

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumi in view of Glenn et al. Dependent claim 3 depends from independent claim 1, and therefore claims, *inter alia*, an integrated circuit substrate having a first surface for receiving a series of aligned layers during the creation of the integrated circuit, and a second surface disposed substantially opposite the first surface, the second surface having no layers formed thereon and at least one alignment mark formed thereon prior to the first surface receiving any of the series of aligned layers during the creation of the integrated circuit, the at least one alignment mark adapted for aligning the series of aligned layers one to another during the creation of the integrated circuit.

The deficiencies of Matsumi in regard to these limitations are described at length above. Glenn et al. do not compensate for the deficiencies of Matsumi. Glenn et al. describe a substrate that already has all of the aligned layers formed on it, because front side processing of the integrated circuit is completed, and the substrate is being diced into individual integrated circuits. Thus, the substrate of Glenn et al. does not have at least one alignment mark for aligning the series of aligned layers one to another, as claimed in claim 1. Glenn et al. describe a substrate that has no markings on the back side during the formation of the layers, and then receives a mark just prior to dicing, after the aligned layers have been formed and scribe lines have been defined on the front side of the substrate. Glenn et al. repeatedly describe forming the back side marks with reference to the features already formed on the front of the substrate. Therefore, Glenn et al. do not describe a substrate having markings that are used to align the layers of an integrated circuit during processing, as claimed in claim 3. Thus, claim 3 patentably defines over Matsumi in view of Glenn et al. Reconsideration and allowance of claim 3 are respectfully requested.

01-107/RCE

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumi in view of Fujimura. Dependent claim 4 depends from independent claim 1, and therefore claims, *inter alia*, an integrated circuit substrate having a first surface for receiving a series of aligned layers during the creation of the integrated circuit, and a second surface disposed substantially opposite the first surface, the second surface having no layers formed thereon and at least one alignment mark formed thereon prior to the first surface receiving any of the series of aligned layers during the creation of the integrated circuit, the at least one alignment mark adapted for aligning the series of aligned layers one to another during the creation of the integrated circuit.

The deficiencies of Matsumi in regard to these limitations are described at length above. Fujimura do not compensate for the deficiencies of Matsumi, in that Fujimura does not describe printing an alignment mark on the back side of the substrate prior to creating any layers of a integrated circuit on the front side of the substrate. Therefore, the combination of Glenn et al. and Fujimura does not described the substrate as claimed in claimed 4. Thus, claim 4 patentably defines over Glenn et al. in view of Fujimura. Reconsideration and allowance of claim 4 are respectfully requested.

COMMENTS ON EXAMINER'S STATEMENTS

The examiner states that "the limitation 'formed thereon prior to the first surface receiving any of the series of aligned layers during the creation of the integrated circuit' is product-by-process claim." This is incorrect. Claim 1 does not recite the steps by which a product is produced. Rather, the cited language describes an element that is present and other elements that are not present in a claimed substrate. There is no description of how the substrate is formed in claim 1.

The examiner further states that "the limitation 'the at least one alignment mark adapted for aligning the series of aligned layers one to another during the creation of the integrated circuit' has been held that the recitation that an element is 'adapted to' perform a function is not a positive limitation but only requires the ability to so perform," and cites *In re Hutchison* in support of this statement. However, the court of *In re Hutchison* never stated that all uses of the word "adapted" fall into this category. In many applications, the ability to so perform a function is a positive limitation. Especially in the

01-107/RCE

present case, where the examiner has cited marks such as those described in Glenn et al., where the marks do not have the ability to so perform because they do not exist at a time when those functions are required, and thus cannot be used in the alignment of various layers.

CONCLUSION

Applicants assert that the claims of the present application patentably define over the prior art made of record and not relied upon for the same reasons as given above. Applicants respectfully submit that a full and complete response to the office action is provided herein, and that the application is now fully in condition for allowance. Action in accordance therewith is respectfully requested.

In the event this response is not timely filed, applicants hereby petition for the appropriate extension of time and request that the fee for the extension be charged to deposit account 12-2355. If other fees are required by this amendment, such as fees for additional claims, such fees may be charged to deposit account 12-2252. Should the examiner require further clarification of the invention, it is requested that he contact the undersigned before issuing the next office action.

Sincerely,

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By: 

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